EV800 EV-DO Router

User Manual

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Introduction

Important Remarks

It is strongly recommended before reading this document, to read the EV800 Router User Manual and specifically the Introduction for having a better overview of what EV800 router is about.

References

EV800 ROUTER DATASHEET

Abbreviations

APN	**Access Point Name**
DAC	Digital Analog Converter
GGSN	Gateway GPRS Support Node
GPRS	General Packet Radio Service
IP	Internet Protocol
KB	Kilobyte
MCC	Mobile Country Code
MNC	Mobile Network Codes
MS	Mobile Station
PDU	Protocol Data Unit
PLMN	Public Land Mobile Network
RSSI	Received Signal Strength Indication
SMA	Small Adapter
SMS	Short Message Services

Produclist

Product Type	Description
EV800-E	EV-DO Rev. A
EV800-H	HSDPA

EV800-T	TD-SCDMA

Appearance

Front Panel

LED	Description
Power	Lights while the router initial.
	Blinks while the router running.
3G	Lights while 3G dialup successful.
	Blinks while data trasmit through 3G.
Wi-Fi	Lights while Wi-Fi function enable.
	Blinks while data trasmit through Wi-Fi.
WAN	Lights while WAN connecting.
	Blinks while data trasmit through WAN.
LAN X 4	Lights while LAN connecting.
	Blinks while data trasmit through LAN.

Rear Interface

Interface	Description
3G Antenna	SMA interface
SIM	3.3V
Consol	Monitor and data transmit for serial port.
WAN	RJ45
LAN X 4	RJ45
Power	Φ2.0
Wi-Fi Antenna	SMA interface

Specification

- *WAN X 1, 10/100M, support xDSL modem/cable modem/Ethernet.*
- *LAN X 4, 10/100M.*
- *802.11 b/g/n inside.*
- *Support 802.11 n drafts, up to 300mbps.*

- *Support WEP/WPA/WPA2/WPA-PSK/WPA2-PSK.*
- *SSID broadcast control.*
- *NAT & DMZ*
- *DDNS*
- *DHCP*
- *Firewall function, support URL filter & MAC filter.*
- *IP-MAC binds function.*
- *Static route configurable.*
- *Update firmware via web.*
- *Remote configure via web.*
- *Multi-language web interface.*

Connection

The router default parameters as follow, the manual function describe will base the default parameters.

IP: 10.10.10.254, sub mask: 255.255.255.0.

There are two way to setting the PC IP address, which connect to the router.

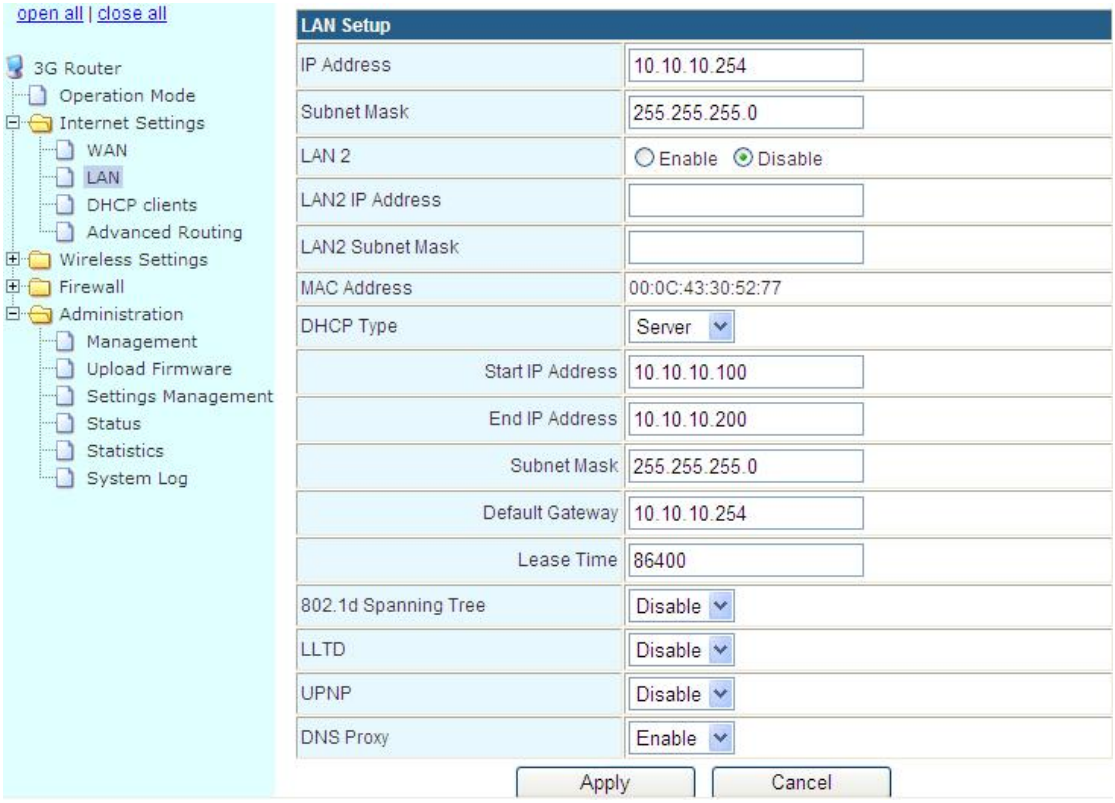
1. Manual setting

Setting the PC IP as 10.10.10.xxx (xxx = 1-253), subnet mask: 255.255.255.0, default gateway: 10.10.10.254, primary DNS: get your DNS from network provider

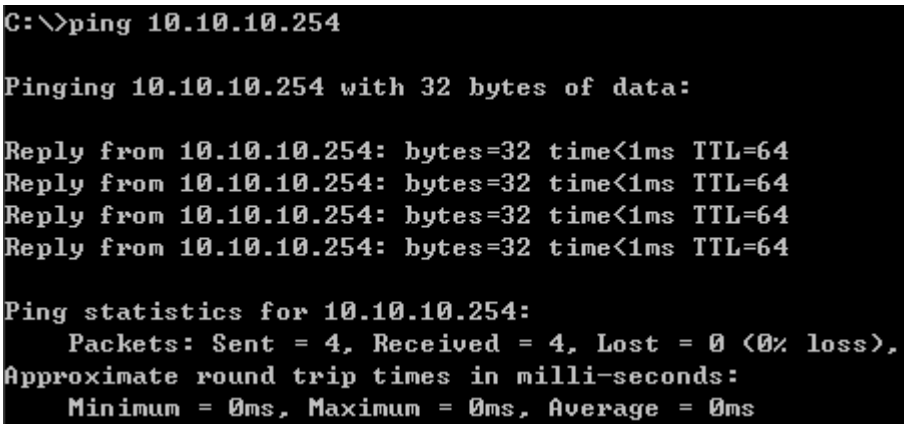
2. DHCP (Preferred)

Setting the PC IP properties, support “Obtain an IP address automatically” and “Obtain DNS server address automatically”.

Need to active DNS Proxy features for the router as follows.



After IP setting, check it by ping. Click Windows start menu, run, execute “cmd” command. Input “ping 10.10.10.254” in the DOS window.


C:\>ping 10.10.10.254
Pinging 10.10.10.254 with 32 bytes of data:
Reply from 10.10.10.254: bytes=32 time<1ms TTL=64
Reply from 10.10.10.254: bytes=32 time<1ms TTL=64
Reply from 10.10.10.254: bytes=32 time<1ms TTL=64
Reply from 10.10.10.254: bytes=32 time<1ms TTL=64
Ping statistics for 10.10.10.254:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

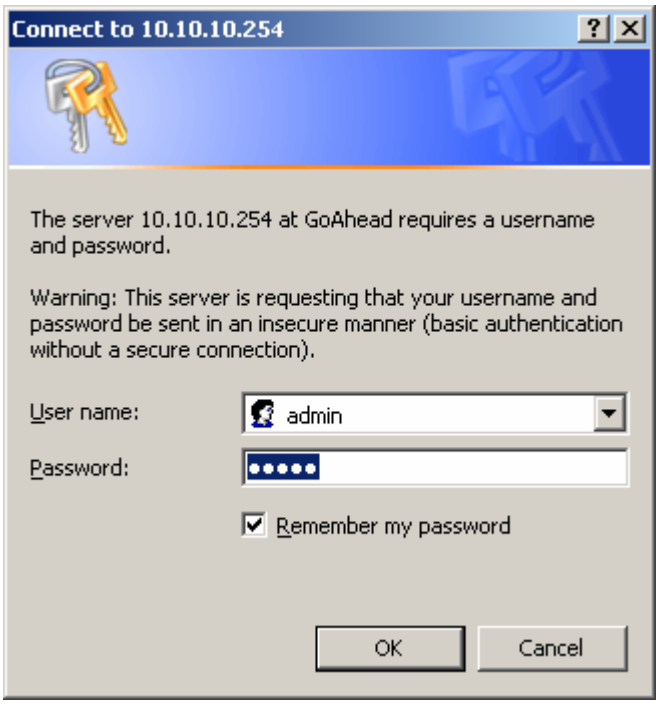
This information means the connection is working.

```
C:\>ping 10.10.10.254

Pinging 10.10.10.254 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.10.10.254:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

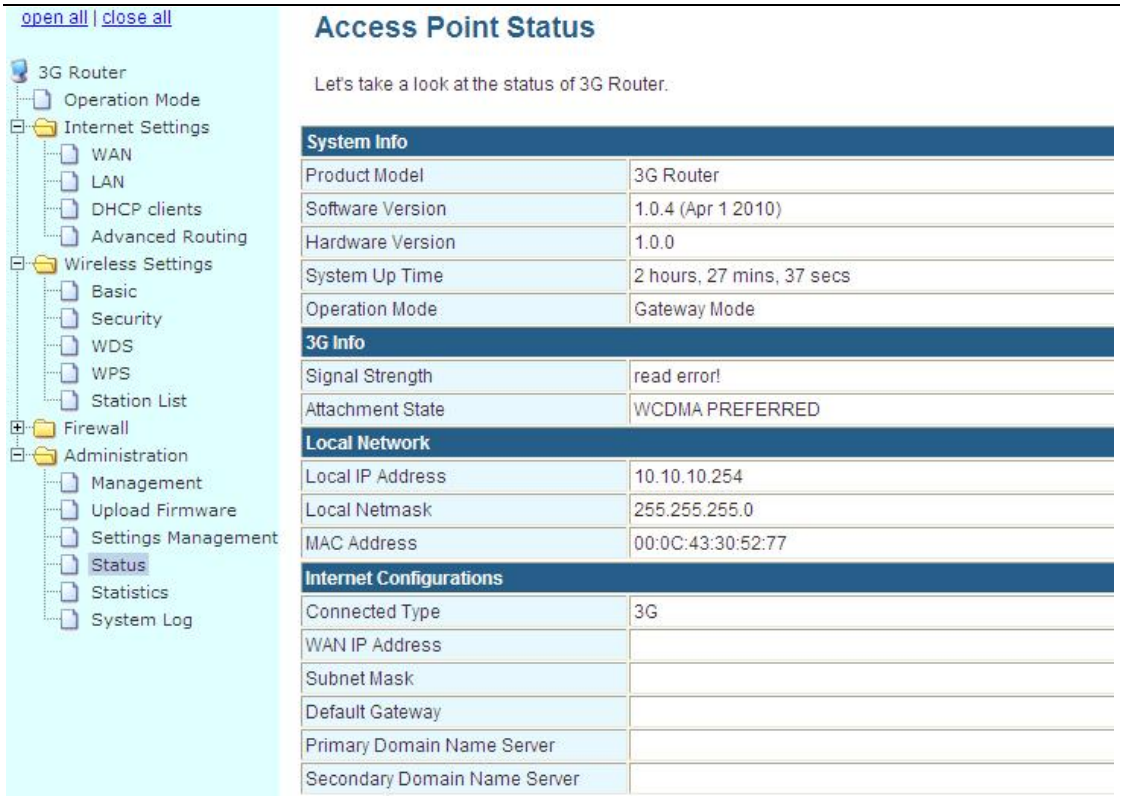
This information means the connection is failure. If so, please check the network cable connection and IP address setting.

Login the router

Run the IE, open the URL: “http://10.10.10.254”, the default user name and password both are “admin”

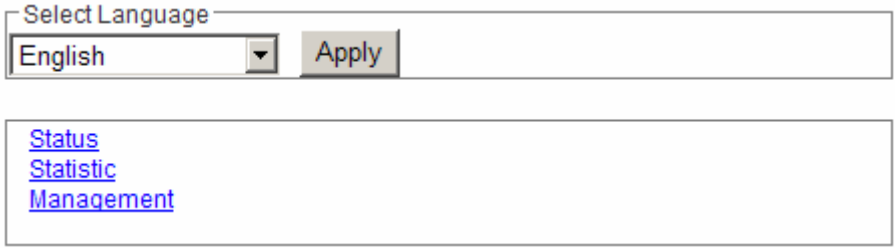

Connect to 10.10.10.254
The server 10.10.10.254 at GoAhead requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
admin
Password:
Remember my password
OK
Cancel

Follow is the configuration web.



Configuration Describe

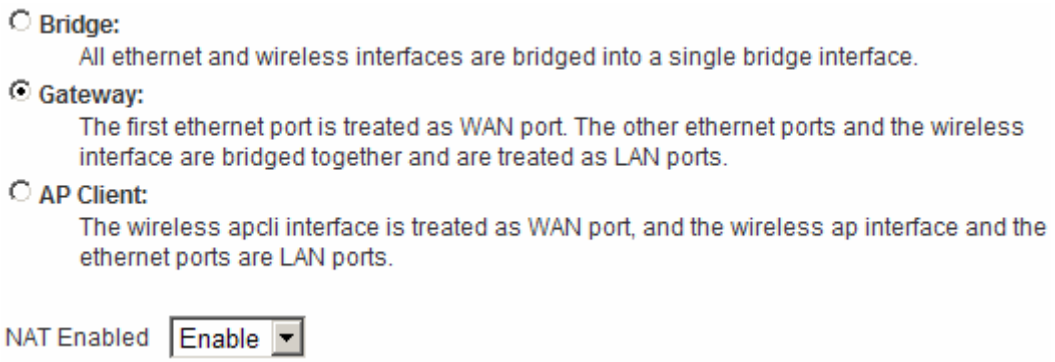
3G Router



Select language, the router support English and simple Chinese.

The status, statistic and management web link.

Operation Mode


Bridge:
All ethernet and wireless interfaces are bridged into a single bridge interface.
Gateway:
The first ethernet port is treated as WAN port. The other ethernet ports and the wireless interface are bridged together and are treated as LAN ports.
AP Client:
The wireless apcli interface is treated as WAN port, and the wireless ap interface and the ethernet ports are LAN ports.
NAT Enabled
Enable

The router operation mode and NAT select. There are three operation modes supported: bridge mode, gateway mode, AP client mode.

Internet settings

Wide Area Network (WAN) Settings

Step 1: fill in MSP APN Parameters, then click “Add to List”

Please be notes that input the Initial Command String as the picture shows
For example: at\^pppcfg=\”card\”,\"card\”
The comma and character “\” must be contained, otherwise EV800 will not dialup to network.

Different network provider has different parameters. Please confirm with your

network provider.

For China Telecom, the parameter is as follows,

Dialing Number: #777
Initial Command String: at\^pppcfg=\"card\",\"card\"
UserName: card
Password: card

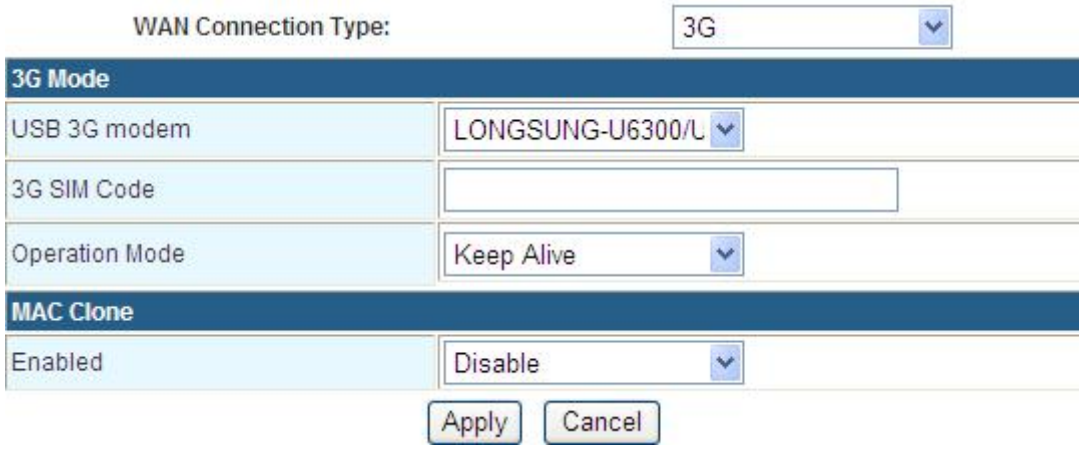
Step 2: Select the MSP APN from "MSP List", click ""

Step 3: at "WAN Connection Type", select 3G.

Choose the correct USB 3G modem type. And click "Apply", EV800 will reboot automatically.

Please confirm the EXACT USB 3G modem before you select.

Normally keep the other parameters default as EV800 shows.



WAN connection type support: Static IP, DHCP, PPPoE, L2TP, PPTP, 3G.

System supports the follow 3G module: HUAWEI EM560, HUAWEI EM660, and HUAWEI EM770.

3G SIM PIN: enter PIN code

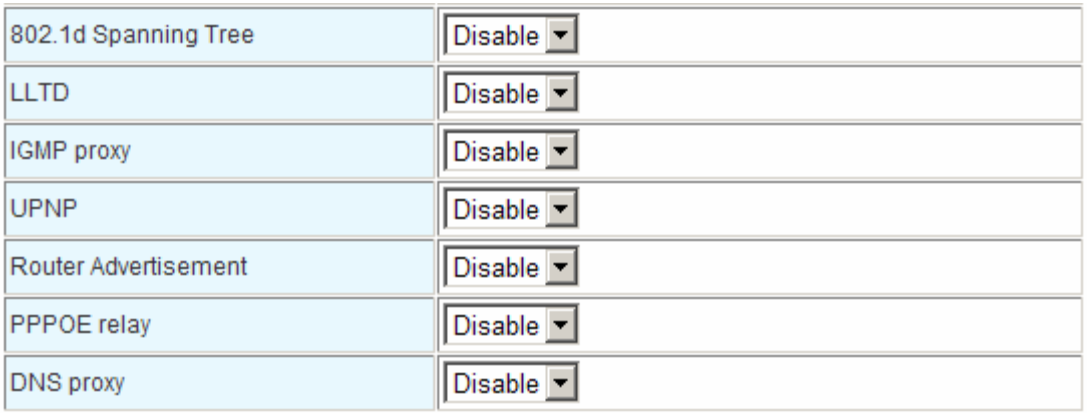
Operation mode: always online, connect on demand, connect on timer, manual.

MAC clone: enable and disable the MAC clone function.

Mobile MSP parameters: edit the MSP parameters.

MSP list: MSP profile list.

Local Area Network (LAN) Settings



Setting the LAN parameters, include IP address, sub mask, VLAN, DHCP, etc.

DHCP Client List

DHCP Clients			
Hostname	MAC Address	IP Address	Expires in

The list of DHCP clients.

Static Routing Settings

Add a routing rule	
Destination	
Range	Host
Gateway	
Interface	LAN
Comment	

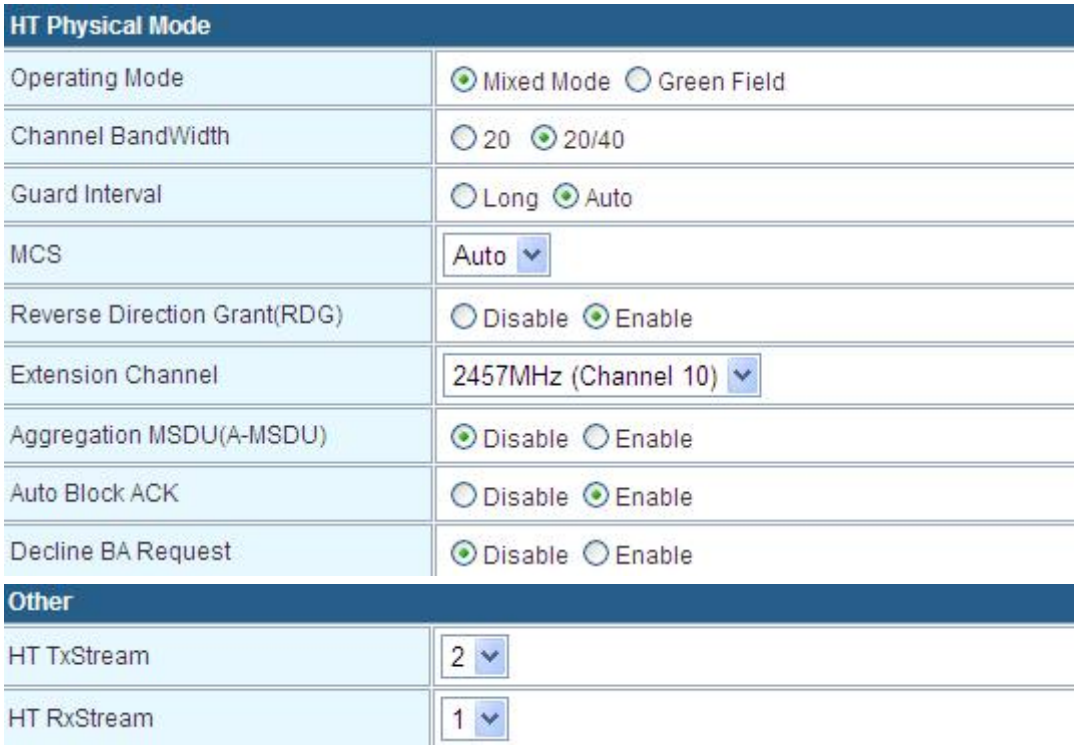
Current Routing table in the system:									
No.	Destination	Netmask	Gateway	Flags	Metric	Ref	Use	Interface	Comment
1	255.255.255.255	255.255.255.255	0.0.0.0	5	0	0	0	LAN(br0)	
2	10.10.10.0	255.255.255.0	0.0.0.0	1	0	0	0	LAN(br0)	

Static routing edit area and rules list.

Wireless settings

Basic Wireless Settings

Wireless Network	
Radio On/Off	RADIO OFF
Network Mode	11b/g/n mixed mode
Network Name(SSID)	3G Router Hidden ☐ Isolated ☐
Multiple SSID1	Hidden ☐ Isolated ☐
Multiple SSID2	Hidden ☐ Isolated ☐
Multiple SSID3	Hidden ☐ Isolated ☐
Multiple SSID4	Hidden ☐ Isolated ☐
Multiple SSID5	Hidden ☐ Isolated ☐
Multiple SSID6	Hidden ☐ Isolated ☐
Multiple SSID7	Hidden ☐ Isolated ☐
Broadcast Network Name (SSID)	◉ Enable ○ Disable
AP Isolation	○ Enable ◉ Disable
MBSSID AP Isolation	○ Enable ◉ Disable
BSSID	00:10:18:01:06:D8
Frequency (Channel)	2437MHz (Channel 6)



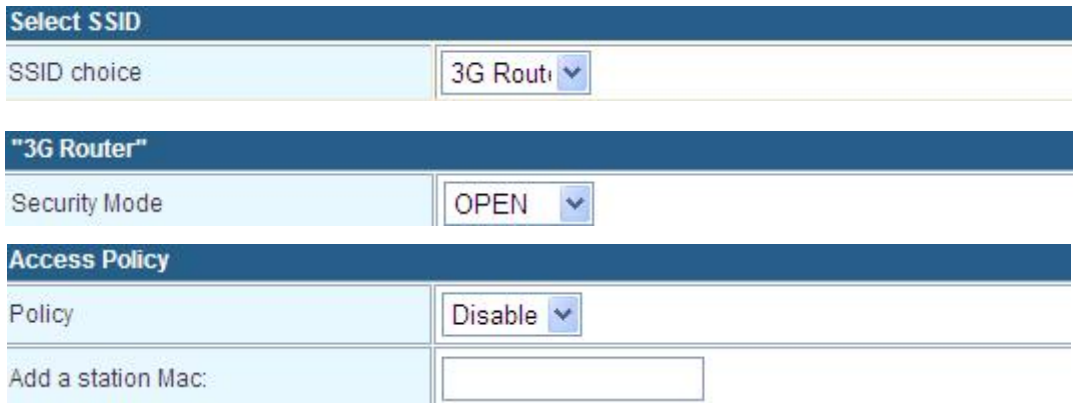
The basic parameters of Wi-Fi setting.

The Radio function enable and disable.

The network mode supports 802.11 b/g/n (draft).

Support multi-SSID up to 8.

Wireless Security/Encryption Settings



The SSID select from multi-SSID setting.

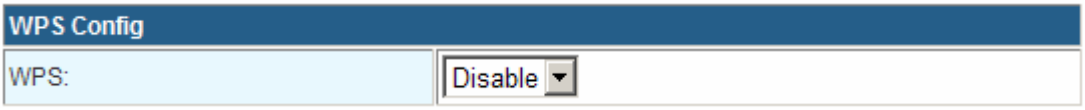
Security mode include: disable, open, share, wep auto, WPA, wpa-psk, wpa2, wpa2-psk, wpa-psk/wpa2-psk, wpa/wpa2, 802.1X.

Access policy: setting the MAC list for access or deny.

Wireless Distribution System

WDS support lazy mode, bridge mode, repeater mode

Wi-Fi Protected Setup



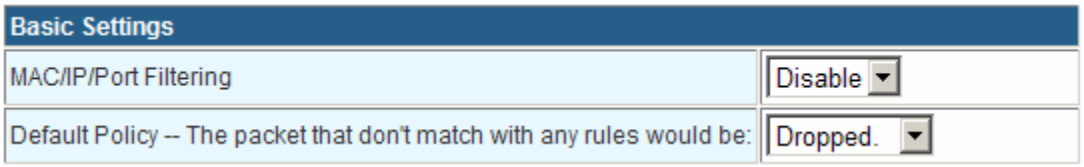
Wi-Fi protected setup.

Station List

Wi-Fi station list.

Firewall

MAC/IP/Port Filtering Settings



MAC/IP/Port Filter Settings	
MAC address	
Dest IP Address	
Source IP Address	
Protocol	None
Dest Port Range	-
Source Port Range	-
Action	Accept
Comment	

(The maximum rule count is 32.)

Current MAC/IP/Port filtering rules in system:									
No.	MAC address	Dest IP Address	Source IP Address	Protocol	Dest Port Range	Source Port Range	Action	Comment	Pkt Cnt
Others would be dropped									-

Package Filter base the MAC/IP/Port rule. The page contains the rule edit area and rule list.

Virtual Server Settings—Port Forwarding

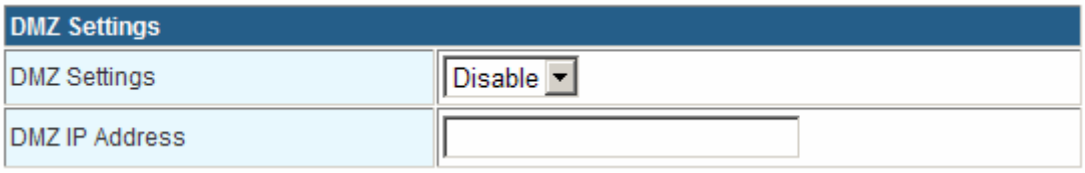
Virtual Server Settings	
Virtual Server Settings	Disable
IP Address	
Port Range	-
Protocol	TCP&UDP
Comment	

(The maximum rule count is 32.)

Current Virtual Servers in system:				
No.	IP Address	Port Range	Protocol	Comment

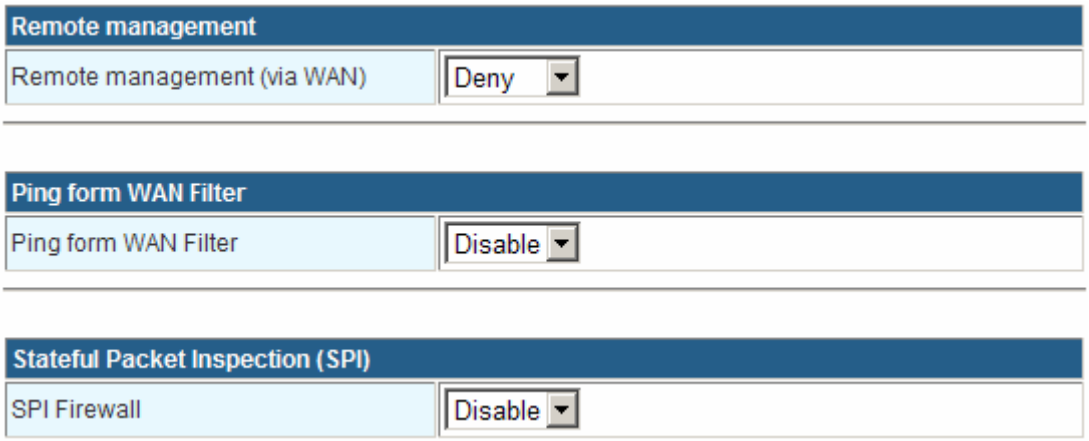
The NAT setting and rules list.

DMZ Settings



DMZ setting.

System Security Settings

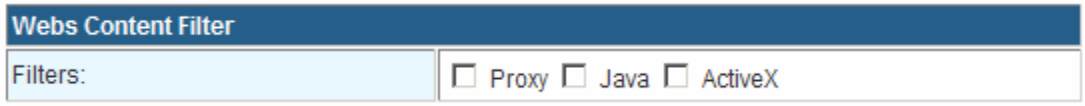


Remote management allows or deny.

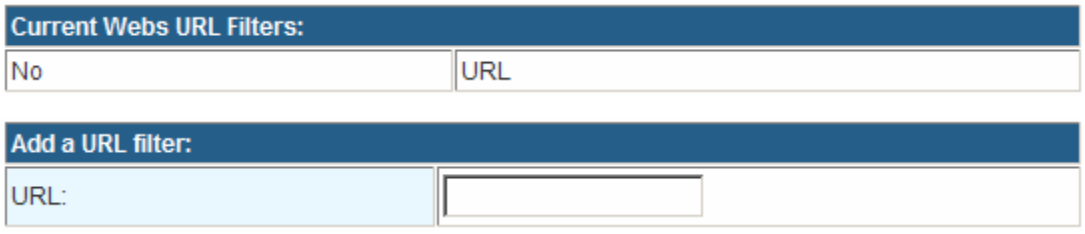
Ping from WAM allow or deny.

SPI enable or disable.

Filter Settings



Webs URL Filter Settings



Current Website Host Filters:	
No	Host(Keyword)

Add a Host(keyword) Filter:	
Keyword	

Web content filter for proxy, java, and activeX.
URL filter and keyword filter setting.

Administration

System Management

Language Settings	
Select Language	English

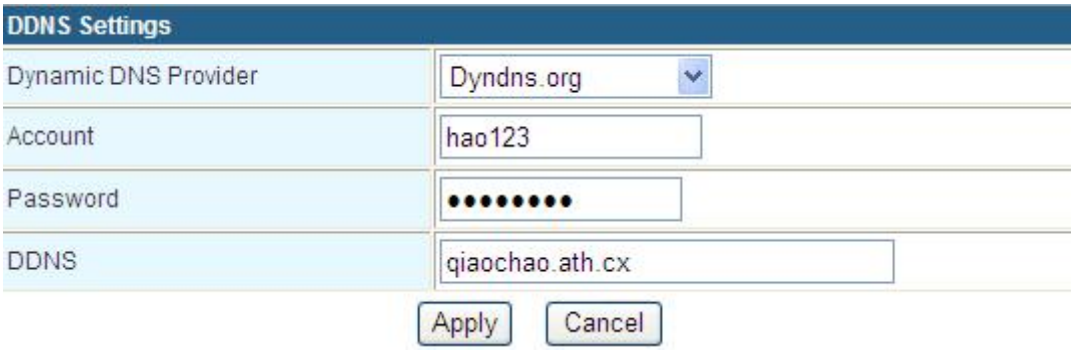
Adminstrator Settings	
Account	admin
Password	●●●●●

NTP Settings	
Current Time	Sat Jan 1 00:51:32 UTC 2000 Sync with host
Time Zone:	(GMT-11:00) Midway Island, Samoa
NTP Server	ex: time.nist.gov ntp0.broad.mit.edu time.stdtime.gov.tw
NTP synchronization(hours)	

Select the language, change the administration account, and time setting.

DDNS Setting

At “Administration--Management”, set the DDNS Settings.



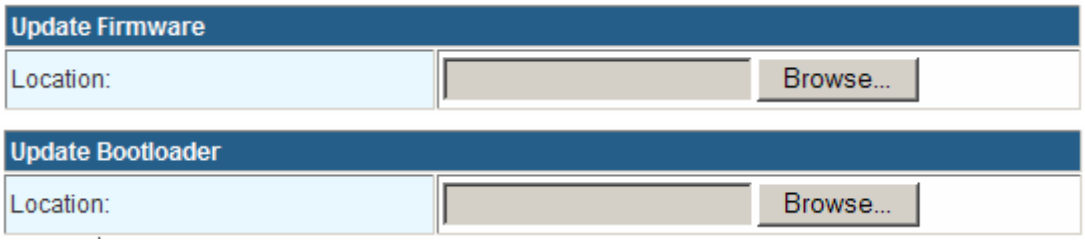
Dynamic DNS Provider: select the DNS server

Account, Password: input info

DDNS: fill in DDNS

Click “Apply” to activate the DDNS.

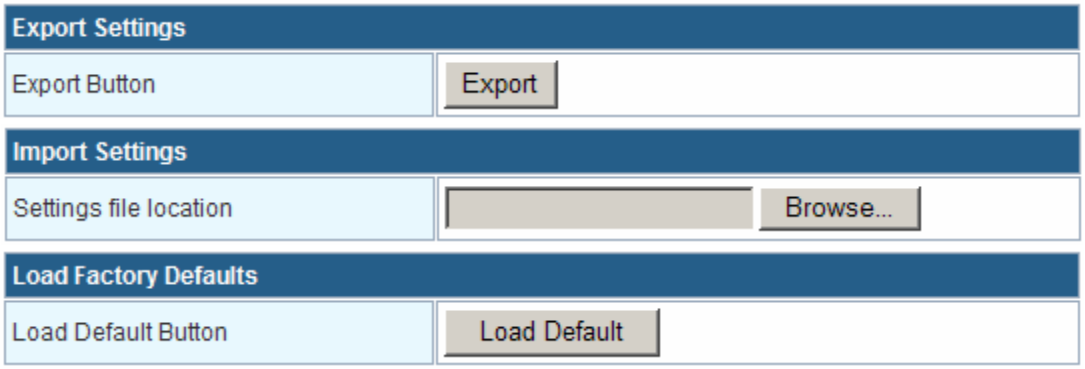
Upgrade Firmware



Upgrade the boot loader and firmware.

Notes: after finish upgrading, should go to “Administration—Settings Management” to “Load Default”, otherwise, there will be uncertain error.

Settings Management



Router parameters export, import and load factory default.

Access Point Status

System Info	
Software Version	1.0.0 (Dec 12 2009)
Hardware Version	1.0.0
System Up Time	1 hour, 30 mins, 2 secs
Operation Mode	Gateway Mode
SN	
PN	
3G Info	
Signal Strength	
Attachment State	Automatic search
Local Network	
Local IP Address	10.10.10.254
Local Netmask	255.255.255.0
MAC Address	00:E0:5D:F7:7F:50
Internet Configurations	
Connected Type	3G
WAN IP Address	
Subnet Mask	
Default Gateway	
Primary Domain Name Server	
Secondary Domain Name Server	
MAC Address	00:0D:09:A0:1B:D8

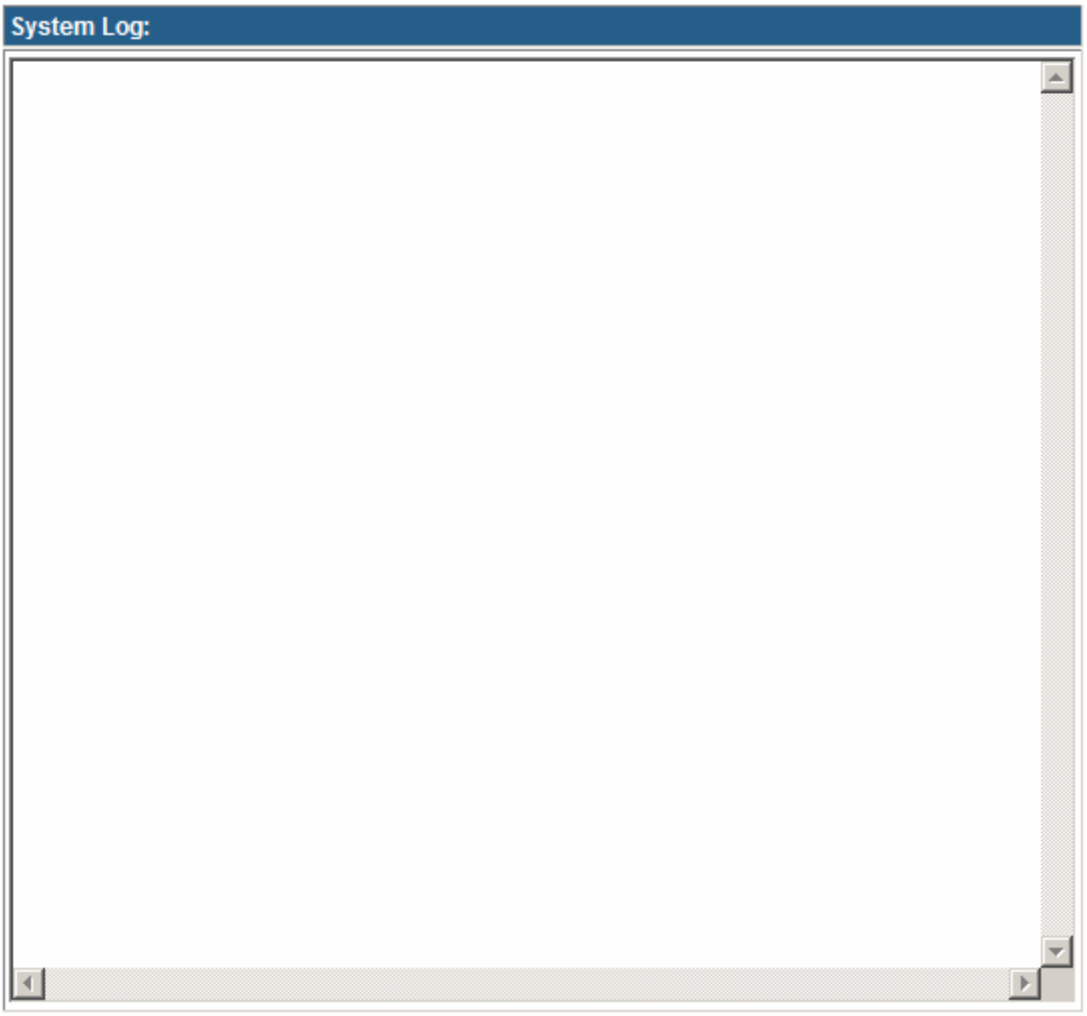
The system running status.

Statistic

WAN/LAN	
WAN Rx packets:	0
WAN Rx bytes:	0
WAN Tx packets:	18
WAN Tx bytes:	1476
LAN Rx packets:	1063
LAN Rx bytes:	100996
LAN Tx packets:	572
LAN Tx bytes:	440808

The network sends and receives Statistics

System Log



The system log.